

REMARKS

This application has been carefully reviewed in light of the Examiner's Office Action dated April 20, 2005. Claim 1 has been amended and claims 2-22 have been added. Reconsideration and full allowance are respectfully requested.

In the April Office Action, the Examiner Objected to the drawings. Replacement drawings addressing the Examiner's rejection are attached and Applicant submits that this objection has been overcome.

The Examiner also indicated that the Cross Reference to Related Applications needed to be amended to provide the current status of the cited applications. Appropriate amendment has been made.

In the Office Action, the Examiner also rejected independent claim 1 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,480,733 to Turcott (hereafter "Turcott"). This rejection is respectfully traversed.

The method of Claim 1 involves obtaining a time-based photoplethysmographic ("pleth") signal that is modulated based on interaction of transmitted optical signals with a patient's blood. The time-based pleth signal includes at least a first component associated with the operation of the patient's respiratory system and a second Mayer wave component that is associated with the patient's autonomic nervous system. This time-based pleth signal is transformed into a frequency domain in order to obtain spectral information including information associated with the first component and the second Mayer wave component. Once the pleth signal is transformed, the resulting spectral information may be further processed to distinguish an effect associated with one of the first component and the second Mayer wave component from effect of the other component. For example, once transformed into spectral information, the Mayer wave component of that signal may be identified through frequency-based filtering. In any case, the distinguished effect is utilized to monitor a physiological parameter.

Turcott utilizes fundamentally different methodology than that discussed above and fails to disclose or suggest, *inter alia*, the use of spectral analysis (i.e., transforming a time-based pleth into a frequency domain for analysis) for distinguishing an autonomic nervous system component (e.g., the Mayer wave). Rather, Turcott discloses monitoring a time-based plethysmographic signal to identify the presence of fluctuations in pulse amplitude that are caused by respiration and the Mayer wave. See Column 19 line 4 – Column 20 line 50. Specifically, Turcott discusses narrow band pass

filtering of a time-based pleth signal and then examining variability of a resultant signal to identify, for example, the presence of respiratory fluctuations and the presence of Mayer waves in certain frequency ranges. Turcott simply discloses determining whether fluctuations exist within a frequency band of a time-based pleth signal. However, Turcott does not, *inter alia*, transform a time-based signal in to a frequency domain to obtain spectral information, process the spectral information to distinguish an effect associated with one of a first component associated with the patient's respiratory system and a second Mayer wave component, or utilize such a distinguished effect to monitor a physiological parameter. Accordingly, Applicant request that this rejection be withdrawn.

The Examiner also provisionally rejected independent claim 1 under 35 U.S.C. 101. Applicant submits that claim 1 has been amended and that the basis for the provisional rejection has been obviated.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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IN THE DRAWINGS

The attached replacement drawing sheet showing the change to Figures 3, where the item originally labeled "V" has been replaced with "w". No new subject matter has been added.

Attachment: Replacement Sheet.